



Heat-related mortality: A review and exploration of heterogeneity

Author(s): Hajat S, Kosatky T
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Abstract:

Although rapid response capacity has been instituted in many cities following recent catastrophic heatwave events, the recognition that theoretically preventable heat-related deaths may occur throughout the summer has provoked much less response. This essay reviews published estimates of the general summertime temperature-mortality relationship characterised in different settings around the world. A random-effects meta-regression is applied to the estimates in relation to a number of standardised city-level characteristics of demography, economy and climate. Heat thresholds were generally higher in communities closer to the equator, suggesting some population adaptation. In almost half of the locations, the risk of mortality increased by between 1% and 3% per 1 degrees C change in high temperature. Increasing population density, decreasing city gross domestic product and increasing percentage of people aged 65 or more were all independently associated with an increase in the heat slope. Improved care of older people, residential architecture and urban planning measures to reduce high temperatures in densely populated areas are likely to play a key role alongside targeted heat-health warning systems in reducing future heat burdens.

Source: <http://dx.doi.org/10.1136/jech.2009.087999>

Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

Ocean/Coastal, Tropical, Urban

Geographic Location:

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resource focuses on specific location

Non-United States, United States

Non-United States: Africa, Asia, Australasia, Europe, Central/South America, Non-U.S. North America

African Region/Country: African Country

Other African Country: South Africa

Asian Region/Country: China, India, Other Asian Country

Other Asian Country: Lebanon;South Korea;Thailand

European Region/Country: European Country

Other European Country : Greece;Spain;Ireland;Hungary;Finland;Slovenia;United Kingdom;Italy;France;Czech Republic;Sweden;Switzerland;Netherlands;Germany;Romania;Bulgaria

Health Impact: 

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Intervention: 

strategy to prepare for or reduce the impact of climate change on health

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Mitigation/Adaptation: 

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status

Other Vulnerable Population: people with chronic illness

Resource Type: 

format or standard characteristic of resource

Review

Resilience: 

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

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Timescale: 

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time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content